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EXAMINER

ARK, DARREN W

ART UNIT	PAPER NUMBER
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3643

MAIL DATE	DELIVERY MODE
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07/17/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

09/980,676

Applicant(s)

BRASH, KENNETH GEORGE

Examiner

Darren W. Ark

Art Unit

3643

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 April 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 24-45 is/are pending in the application.
- 4a) Of the above claim(s) 38 and 39 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 24-37 and 40-45 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Claims 38 and 39 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected Group, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 08/09/2007.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
3. Claim 26 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In regard to claim 26, the term “a second shipping container” renders the claim vague and indefinite since it fails to further modify the term “at least one ISO general purpose shipping container” and therefore it is unclear whether they represent the same structure. The term should be rewritten as “said at least one ISO general purpose shipping container further comprising a second shipping container”.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 24-27, 30, 40, 41, 45 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by German Pat. No. 19950634 to Binker et al.

In regard to claim 24, Binker et al. discloses a mobile fumigation system positioned within at least one ISO general purpose shipping container (either 1, 9 with 11, or 4 with 7) comprising a first gas-tight compartment including a fumigation chamber (11 which is capable of receiving produce therein); a second compartment (4, 7) including a fumigation apparatus (5) operatively coupled to the fumigation chamber (see Fig. 1); and a partition wall separating the first and second compartments (outer walls defining either 9 or 7); a fumigant inlet device (8) operatively coupled to the fumigation chamber through the partition wall to allow a fumigant (hot air) into the fumigation chamber (11); an extraction device (18) operatively coupled to the fumigation chamber and arranged to remove a majority of the fumigant from the fumigation chamber (18 removes hot air from 11); an absorption means (17 or 6) operatively coupled to the extraction device and being designed to absorb the fumigant removed from the fumigation chamber (17 or 6 can remove heat from 11).

In regard to claim 25, Binker et al. discloses a mobile fumigation system (see wheels on portions of system hooked up to mill 1) comprising a fumigation chamber (1

Art Unit: 3643

or 9 with 11) defined by at least one gas tight ISO general purpose shipping container (1 or 11) adapted to accommodate produce to be fumigated (produce 2 in 1 or 11, 9 capable of holding produce therein; fumigation chamber not being particularly claimed); fumigation apparatus located in a separate container (4 with 7) comprising a fumigant inlet device (8), an extraction device (18), and an absorption device (6 or 17 absorbs heat) for absorbing the fumigant removed from the fumigant chamber; wherein the fumigation apparatus is operatively coupled to the fumigation chamber of the at least one shipping container (see Fig. 1).

In regard to claims 26 and 40, Binker et al. discloses an additional shipping container (1).

In regard to claim 27, Binker et al. discloses the partition wall in the shipping container separating the fumigation apparatus and the fumigation chamber being secure against passage of fumigant (exterior walls of 7 & 9 are secure against passage of hot air except for 8 & 10; no particular structure being recited).

In regard to claim 30, Binker et al. discloses the fumigation apparatus incorporating a source of the fumigant (15 via 16) which is directly associated with the heating source (heat from 5 is circulated into the vicinity of 16).

In regard to claims 31 and 41, Binker et al. discloses the fumigant inlet device being adapted to detachably couple to a mobile source of the fumigant (8 is capable of attaching to 16 in a similar fashion that 16 attaches to 1 in Fig. 1; no structure is being particularly claimed).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 24-28, 30-37, 40-45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japanese Pat. No. 8-322449 to Otsuki et al. in view of Smithyman 6,615,534 and Japanese Pat. No. 10-151320 to Haraguchi.

In regard to claim 24, Otsuki et al. discloses a mobile fumigation system positioned within at least one ISO general purpose shipping container (container van 1) comprising a first gas-tight compartment including a fumigation chamber (10); a second compartment (9) including a fumigation apparatus (12) operatively coupled to the fumigation chamber (see Fig. 1); and a partition wall (3) separating the first and second compartments; a fumigant inlet device (21, 13) operatively coupled to the fumigation chamber through the partition wall to allow a fumigant (CO₂) into the fumigation chamber (10); an extraction device (14) operatively coupled to the fumigation chamber and arranged to remove a majority of the fumigant from the fumigation chamber (see Figs. 2-4); an absorption means (35) operatively coupled to the extraction device (via interconnection of the parts into an assembly) and being designed to absorb the ethylene and removed it from the fumigation chamber (35 performs the function of absorbing ethylene which is circulating within the container; no particular fumigant or absorption means being particularly claimed), but does not disclose an extraction device

Art Unit: 3643

to remove a majority of the toxic fumigant from the fumigation chamber or an absorption device coupled to the extraction device designed to absorb the toxic fumigant removed from the fumigation chamber. Smithyman discloses a fumigation system utilizing a phosphine gas as the fumigant and an absorption means (scrubber or filter 68) for removing potentially dangerous gases. It would have been obvious to one of ordinary skill in the art to modify the system of Otsuki et al. such that it utilizes a fumigant other than CO₂ and has an absorption device in view of Smithyman in order to provide a more lethal fumigant gas and an accompanying means for absorbing the potentially dangerous gas before it is released into the surroundings outside of the fumigation chamber. Otsuki et al. and Smithyman do not disclose an extraction device operatively coupled to the fumigation chamber. Haraguchi discloses an extraction device (opening of damper 5 and activation of exhaust fan 6) which is arranged to remove a majority of the fumigant from the fumigation chamber by causing exhaust gases to pass through absorption device. It would have been obvious to one of ordinary skill in the art to modify the system of Otsuki et al. and Smithyman such that there is an extraction device arranged to remove a majority of the fumigant from the fumigation chamber in view of Haraguchi in order to provide a means whose sole purpose is to remove harmful gases from the fumigation chamber such that a majority of the harmful gases is evacuated from the produce stored therewithin.

In regard to claim 30, Otsuki et al. discloses the fumigation apparatus incorporating a source of the fumigant (20, 29) which is directly associated with a heating source (26).

In regard to claim 32, Otsuki et al. discloses the second compartment (9) incorporating a control box (25), a gas-tight fumigant supply source (20), and a plurality of fumigant delivery pipes (portions of 21, 13) and valves (18, 22, 23).

In regard to claim 33, Otsuki et al. discloses the fumigant inlet device (13) coupled to a dispersion pipe system (13a, 5).

In regard to claim 34, Otsuki et al. discloses the system control box containing a plurality of floor and wall-mounted pipes (see pipes between each of 14-17, 19, & 35 and apertures in 5, 6) independently connected via a system of taps and connectors to a fumigant sampling and detection meter unit (17 connected to the pipes via the interconnected closed loop system; no particular structural configuration being claimed) located in the second compartment (9). Also in regard to claim 34, Otsuki et al. and Smithyman and Haraguchi disclose a fumigant sampling and detection meter unit (84a-c of Smithyman).

In regard to claim 35, Otsuki et al. discloses the system control box (25) containing a fumigant sampling and detection meter unit (17) and power supply switches for mixing fans, exhaust fan (14), lights (inherently there are light indicators on a control panel), gas heaters (26), and valve actuators (for 18, 22, 23). Also in regard to claim 35, Otsuki et al. and Smithyman and Haraguchi disclose the system control box (25 of Otsuki et al., 38 of Smithyman) containing a fumigant sampling and detection meter unit (84a-c of Smithyman) and power supply switches for mixing fans, exhaust fan, lights, gas heaters, and valve actuators (see Smithyman Fig. 1, col. 5, lines 60-67, and col. 6, lines 1-13).

8. Claim 29 is rejected under 35 U.S.C. 103(a) as being unpatentable over Japanese Pat. No. 8-322449 to Otsuki et al. in view of Smithyman 6,615,534 and Japanese Pat. No. 10-151320 to Haraguchi as applied to claim 24 above, and further in view of Imagawa 4,716,676 or Washburn, Jr. 5,203,108 or Black 3,811,579.

Otsuki et al. and Smithyman and Haraguchi do not disclose the fumigation system including a sliding bed or floor on which the produce resides. Imagawa and Washburn, Jr. disclose a fumigation system (see Figs. 1, 2 OR see Fig. 1) including a sliding bed or floor (25 on 16 OR 26) on which the produce (1 OR 20, 22) resides. Black discloses a mechanized van loading and unloading apparatus and system comprising a sliding bed or floor (17, 40) on which products (13a, b) reside. It would have been obvious to one of ordinary skill in the art to modify the fumigation system of Otsuki et al. and Smithyman and Haraguchi such that it includes a sliding bed or floor on which the produce resides in view of Imagawa or Washburn, Jr. or Black in order to facilitate the loading and unloading of large quantities of the produce from within the volume of the fumigation chamber.

9. Claims 36, 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japanese Pat. No. 8-322449 to Otsuki et al. in view of Smithyman 6,615,534 and Japanese Pat. No. 10-151320 to Haraguchi as applied to claim 24 above, and further in view of Yates 5,904,909.

In regard to claims 36 and 37, Otsuki, Smithyman, and Haraguchi discloses a fumigation device utilizing methyl bromide as a fumigation gas wherein the fumigation waste gas containing methyl bromide being introduced into a methyl bromide absorbing

Art Unit: 3643

column (4 of Haraguchi) from a fumigation warehouse (1 of Haraguchi), the methyl bromide being adsorbed by the activated carbon. Otsuki et al. and Smithyman and Haraguchi disclose the activated carbon being desorbed by a hot air generated by a desorption heater (7 of Haraguchi), but do not disclose the device for washing at least part of the absorption bed with a chemical solution comprising sodium thiosulphate for degrading methyl bromide. Yates discloses a means for washing an absorption means (see col. 5, lines 56-end). It would have been obvious to one of ordinary skill in the art to modify the fumigation apparatus of Otsuki et al. and Smithyman and Haraguchi such that it has a device for washing at least part of the absorption bed with a chemical solution to remove and degrade the absorbed fumigant in view of Yates in order to provide means for completely cleaning the absorption bed using a reactive solution so as to prevent build-up of the potentially dangerous substances on the absorption means and possible release into the ambient air.

10. Claims 24-28, 30, 40, 41, 45 are rejected under 35 U.S.C. 103(a) as being unpatentable over German Pat. No. 19950634 to Binker et al. in view of Japanese Pat. No. 10-151320 to Haraguchi.

Alternatively Binker et. al. does not disclose the absorption device comprising an absorption bed including activated carbon for absorbing at least part of the fumigant extracted from the fumigation chamber. Haraguchi discloses fumigation waste gas containing methyl bromide being introduced into a methyl bromide absorbing column (4) from a fumigation warehouse (1), the methyl bromide being adsorbed by the activated carbon. It would have been obvious to one of ordinary skill in the art to modify the

fumigation of apparatus of Binker et al. such that it includes the absorption device comprising an absorption bed including activated carbon for absorbing at least part of the fumigant extracted from the fumigation chamber in view of Haraguchi in order to render the discharge waste gas from the fumigation process harmless by removing the methyl bromide compound.

11. Claims 36, 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over German Pat. No. 19950634 to Binker et al. in view of Japanese Pat. No. 10-151320 to Haraguchi as applied to claims 24, 28 above, and further in view of Yates 5,904,909.

Binker et al. and Haraguchi disclose the activated carbon being desorbed by a hot air generated by a desorption heater (7 of Haraguchi), but do not disclose a device for washing at least part of the absorption bed with a chemical solution to remove and degrade the absorbed fumigant. Yates discloses a means for washing an absorption means (see col. 5, lines 56-end). It would have been obvious to one of ordinary skill in the art to modify the fumigation apparatus of Binker et al. and Haraguchi such that it has a device for washing at least part of the absorption bed with a chemical solution to remove and degrade the absorbed fumigant in view of Yates in order to provide means for completely cleaning the absorption bed using a reactive solution so as to prevent build-up of the potentially dangerous substances on the absorption means and possible release into the ambient air.

Response to Arguments

12. Applicant's arguments filed 4/16/2009 have been fully considered but they are not persuasive.

In regard to applicant's argument that "Otsuki describes a van-type container...", the Examiner contends that the term "ISO general purpose shipping container" fails to more particularly define over the structure of Otsuki and that the Examiner has interpreted the term as broadly as reasonably possible.

In regard to applicant's argument that "Otsuki...without using toxic fumigants...", the Examiner agrees with the argument.

In regard to applicant's argument that "Binker...fumigation of large building spaces...neither discloses nor suggests a mobile fumigation system...", the Examiner contends that Binker discloses the mobile fumigation system in its Fig. 1 which clearly illustrates wheels on some parts of the fumigation system. Applicant has failed to more particularly claim the structural features of the mobile fumigation system in a manner which clearly defines the desired invention's claims over Binker.

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, Otsuki discloses

the basic structure of a mobile fumigation system, the Smithyman patent discloses the use of an absorption device to absorb toxicant fumigant gases in a fumigation system, and the Haraguchi patent discloses the use of an extraction device in communication with the fumigation chamber in a fumigation system.

Conclusion

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Nagagawa et al. 5,312,034 discloses a fumigation facility (32) with a fumigation chamber (40) having a first compartment (area behind 60 in Fig. 13) and a second compartment (area in front of 60 in Fig. 13) separated by a partition (60), circulation fan (64), duct (66), pair of heating units (68), cooling unit (70), and a source of volatized methyl bromide fumigant (72).

14. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Darren W. Ark whose telephone number is (571) 272-6885. The examiner can normally be reached on M-F, 8:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter M. Poon can be reached on (571) 272-6891. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Darren W. Ark/
Darren W. Ark
Primary Examiner
Art Unit 3643

DWA